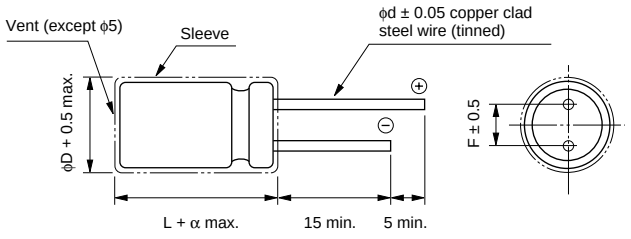
ELNA®

RE3 Miniature Aluminum Electrolytic Capacitors

Series RE3 Miniature Capacitors

- One size smaller than RE2 Series.
- Guaranteed for 2000 hours at 85°C.

Outline Drawing



Lead spacing and wire diameter

ϕD	5	6.3	8	10	12.5	16	18
F	2.0	2.5	3.5	5.0		7.5	
ϕd	0.5		0.6			0.8	
α	1.5		1.5 for L16 max. 2.0 for L20 min.				

Unit: mm

Photo

Specifications

No.	Item	Performance
1	Temperature range (°C)	–40 to +85
2	Leakage current (μA)	Rated voltage (V): 6.3 ~ 100 / 160 ~ 450 ——: Less than 0.03CV or 4 whichever is larger (after one minute); Less than 0.01CV or 3 whichever is larger (after two minutes) / CV ≤ 1000 : Less than 0.1 CV + 40 (after one minute); CV > 1000 : Less than 0.04 CV + 100 (after one minute) C : Capacitance (μF) V : Voltage (V)
3	Capacitance tolerance (%)	±20 (20°C, 120 Hz)
4	Tangent of loss angle (tan δ)	Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 / 63 / 100 / 160 / 200 / 250 / 315 / 350 / 400 / 450 tan δ: 0.28 / 0.24 / 0.20 / 0.16 / 0.14 / 0.12 / 0.10 / 0.08 / 0.20 / 0.20 / 0.20 / 0.24 / 0.24 / 0.24 / 0.24 (20°C, 120 Hz) 0.02 is added to each 1000 μF increase over 1000 μF.
5	Stability at low temperature	Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 / 63 / 100 / 160 / 200 / 250 / 315 / 350 / 400 / 450 Impedance ratio Z–25°C/Z+20°C: 5 / 4 / 3 / 2 / 4 Impedance ratio Z–40°C/Z+20°C: 12 / 10 / 8 / 5 / 4 / 3 / 15 / 10
6	Endurance (85°C) (Applied ripple current)	(120 Hz) Test time: 2000 hrs Leakage current: Initial specified value or less Change in capacitance: Within ±20% of initial value tan δ: 200% or less of initial specified value
7	Max. storage temp. (85°C)	Test time 1000 hrs. Others have same as endurance in No. 6, Pretreatment performed (JIS C 5102).
8	Applicable Standards	JIS C 5102 and JIS C 5141.

Coefficients of Frequency for Ripple Current

Rated Voltage (V)	Frequency (Hz) / CV (μF x V)	50 • 60	120	1 k	10 k	100 k
6.3 to 16	All CV value	0.8	1	1.1	1.2	1.2
25 to 35	≤ 1000	0.8	1	1.5	1.7	1.7
	1000 <	0.8	1	1.2	1.3	1.3
50 to 100	≤ 1000	0.8	1	1.6	1.9	1.9
	1000<	0.8	1	1.2	1.3	1.3
160 to 450	All CV value	0.8	1	1.3	1.5	1.6

Coefficients of Temperature for Ripple Current

Temperature (°C)	+70 or less	+85
Coefficients	1.35	1

This catalog printed in U.S.A. on 1/98.
Specification and dimensions in this catalog are subject to change without notice.
If necessary, drawings can be provided.

RE3 Miniature Aluminum Electrolytic Capacitors

Case size by working voltage & capacitance (in mm)

(mm)

WV(V) / Cap.(μF)	6.3	10	16	25	35	50	63	100
0.1						5 x 11		5 x 11
0.22						5 x 11		5 x 11
0.33						5 x 11		5 x 11
0.47						5 x 11		5 x 11
1						5 x 11		5 x 11
2.2						5 x 11		5 x 11
3.3						5 x 11		5 x 11
4.7				5 x 11	5 x 11	5 x 11	5 x 11	5 x 11
10			5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	6.3 x 11
22			5 x 11	5 x 11	5 x 11	5 x 11	5 x 11	6.3 x 11
33			5 x 11	5 x 11	5 x 11	5 x 11	6.3 x 11	8 x 11.5
47		5 x 11	5 x 11	5 x 11	5 x 11	6.3 x 11	6.3 x 11	10 x 12.5
100		5 x 11	5 x 11	6.3 x 11	6.3 x 11	8 x 11.5	10 x 12.5	10 x 20
220	5 x 11	6.3 x 11	6.3 x 11	8 x 11.5	10 x 12.5	10 x 12.5	10 x 16	12.5 x 20
330	6.3 x 11	6.3 x 11	8 x 11.5	10 x 12.5	10 x 12.5	10 x 16	10 x 20	12.5 x 25
470	6.3 x 11	8 x 11.5	8 x 11.5	10 x 12.5	10 x 16	12.5 x 20	12.5 x 20	16 x 25
1000	8 x 11.5	10 x 12.5	10 x 16	10 x 20	12.5 x 20	12.5 x 25	16 x 25	18 x 40
2200	10 x 20	10 x 20	12.5 x 20	12.5 x 25	16 x 25	16 x 35.5		
3300	10 x 20	12.5 x 20	12.5 x 25	16 x 25	16 x 35.5	18 x 35.5		
4700	12.5 x 20	12.5 x 25	16 x 25	16 x 31.5	18 x 35.5			
6800	12.5 x 25	16 x 25	16 x 35.5	18 x 35.5				
10000	16 x 25	16 x 35.5	18 x 35.5					
15000	16 x 35.5	18 x 35.5						
22000	18 x 40							

WV(V) / Cap.(μF)	160	200	250	315	350	400	450
0.47	6.3 x 11	6.3 x 11	6.3 x 11	6.3 x 11	6.3 x 11	6.3 x 11	8 x 11.5
1	6.3 x 11	6.3 x 11	6.3 x 11	6.3 x 11	6.3 x 11	6.3 x 11	8 x 11.5
2.2	6.3 x 11	6.3 x 11	6.3 x 11	8 x 11.5	8 x 11.5	8 x 11.5	10 x 12.5
3.3	6.3 x 11	6.3 x 11	8 x 11.5	10 x 12.5	10 x 12.5	10 x 12.5	10 x 16
4.7	6.3 x 11	8 x 11.5	8 x 11.5	10 x 12.5	10 x 12.5	10 x 16	10 x 20
10	8 x 11.5	10 x 12.5	10 x 16	10 x 20	10 x 20	12.5 x 20	12.5 x 20
22	10 x 16	10 x 20	12.5 x 20	12.5 x 20	12.5 x 25	12.5 x 25	16 x 25
33	10 x 20	12.5 x 20	12.5 x 25	16 x 25	16 x 25	16 x 25	16 x 31.5
47	12.5 x 20	12.5 x 20	12.5 x 25	16 x 25	16 x 25	16 x 31.5	16 x 35.5
100	12.5 x 25	16 x 25	16 x 31.5	18 x 31.5	18 x 31.5		
220	16 x 31.5	18 x 35.5					
330	18 x 31.5						

This catalog printed in U.S.A. on 11/99
Specification and dimensions in this catalog are subject to change without notice.
If necessary, drawings can be provided.

RE3 Miniature Aluminum Electrolytic Capacitors

Standard Ratings

ELNA PART NO. / WV (V)	CAP. (μF)	SIZE (ϕ x L) (mm)	tan δ	Ripple Current (mArms)
6.3 V				
RE3-6V221M	220	5 x 11	0.28	200
RE3-6V331M	330	6.3 x 11	0.28	270
RE3-6V471M	470	6.3 x 11	0.28	322
RE3-6V102M	1000	8 x 11.5	0.28	546
RE3-6V222M	2200	10 x 20	0.30	1010
RE3-6V332M	3300	10x 20	0.32	1230
RE3-6V472M	4700	12.5 x 20	0.34	1710
RE3-6V682M	6800	12.5 x 25	0.38	1930
RE3-6V103M	10000	16 x 25	0.44	2450
RE3-6V153M	15000	16 x 35.5	0.54	2860
RE3-6V223M	22000	18 x 40	0.68	3340
10 V				
RE3-10V470M	47	5 x 11	0.24	99
RE3-10V101M	100	5 x 11	0.24	146
RE3-10V221M	220	6.3 x 11	0.24	240
RE3-10V331M	330	6.3 x 11	0.24	290
RE3-10V471M	470	8 x 11.5	0.24	417
RE3-10V102M	1000	10 x 12.5	0.24	650
RE3-10V222M	2200	10 x 20	0.26	1080
RE3-10V332M	3300	12.5 x 20	0.28	1430
RE3-10V472M	4700	12.5 x 25	0.30	1780
RE3-10V682M	6800	16 x 25	0.34	2220
RE3-10V103M	10000	16 x 35.5	0.40	2700
RE3-10V153M	15000	18 x 35.5	0.50	3100
16 V				
RE3-16V100M	10	5 x 11	0.20	50
RE3-16V220M	22	5 x 11	0.20	75
RE3-16V330M	33	5 x 11	0.20	92
RE3-16V470M	47	5 x 11	0.20	110
RE3-16V101M	100	5 x 11	0.20	160
RE3-16V221M	220	6.3 x 11	0.20	264
RE3-16V331M	330	8 x 11.5	0.20	383
RE3-16V471M	470	8 x 11.5	0.20	457
RE3-16V102M	1000	10 x 16	0.20	791
RE3-16V222M	2200	12.5 x 20	0.22	1350
RE3-16V332M	3300	12.5 x 25	0.24	1690
RE3-16V472M	4700	16 x 25	0.26	2100
RE3-16V682M	6800	16 x 35.5	0.30	2580
RE3-16V103M	10000	18 x 35.5	0.36	3130
25 V				
RE3-25V4R7M	4.7	5 x 11	0.16	38
RE3-25V100M	10	5 x 11	0.16	55
RE3-25V220M	22	5 x 11	0.16	82
RE3-25V330M	33	5 x 11	0.16	100
RE3-25V470M	47	5 x 11	0.16	118
RE3-25V101M	100	6.3 x 11	0.16	199
RE3-25V221M	220	8 x 11.5	0.16	349
RE3-25V331M	330	10 x 12.5	0.16	510
RE3-25V471M	470	10 x 12.5	0.16	545
RE3-25V102M	1000	10 x 20	0.16	996
RE3-25V222M	2200	12.5 x 25	0.18	1660
RE3-25V332M	3300	16 x 25	0.20	2030
RE3-25V472M	4700	16 x 31.5	0.22	2650
RE3-25V682M	6800	18 x 35.5	0.26	3290
35 V				
RE3-35V4R7M	4.7	5 x 11	0.14	40
RE3-35V100M	10	5 x 11	0.14	59
RE3-35V220M	22	5 x 11	0.14	87
RE3-35V330M	33	5 x 11	0.14	107
RE3-35V470M	47	5 x 11	0.14	130
RE3-35V101M	100	6.3 x 11	0.14	214
RE3-35V221M	220	10 x 12.5	0.14	443
RE3-35V331M	330	10 x 12.5	0.14	542
RE3-35V471M	470	10 x 16	0.14	664
RE3-35V102M	1000	12.5 x 20	0.14	1210
RE3-35V222M	2200	16 x 25	0.16	1950
RE3-35V332M	3300	16 x 35.5	0.18	2510
RE3-35V472M	4700	18 x 35.5	0.20	2990

Note: Allowable Ripple Current 120 Hz at 85°C

This catalog printed in U.S.A. on 1/98.
Specification and dimensions in this catalog are subject to change without notice.
If necessary, drawings can be provided.

RE3 Miniature Aluminum Electrolytic Capacitors

Standard Ratings

ELNA PART NO. / WV (V)	CAP. (μF)	SIZE (φ x L) (mm)	tan δ	Ripple Current (mArms)
50 V				
RE3-50VR10M	0.1	5 x 11	0.12	3
RE3-50VR22M	0.22	5 x 11	0.12	6
RE3-50VR33M	0.33	5 x 11	0.12	9
RE3-50VR47M	0.47	5 x 11	0.12	13
RE3-50V010M	1	5 x 11	0.12	21
RE3-50V2R2M	2.2	5 x 11	0.12	31
RE3-50V3R3M	3.3	5 x 11	0.12	38
RE3-50V4R7M	4.7	5 x 11	0.12	45
RE3-50V100M	10	5 x 11	0.12	66
RE3-50V220M	22	5 x 11	0.12	98
RE3-50V330M	33	5 x 11	0.12	126
RE3-50V470M	47	6.3 x 11	0.12	155
RE3-50V101M	100	8 x 11.5	0.12	260
RE3-50V221M	220	10 x 12.5	0.12	443
RE3-50V331M	330	10 x 16	0.12	595
RE3-50V471M	470	12.5 x 20	0.12	887
RE3-50V102M	1000	12.5 x 25	0.12	1400
RE3-50V222M	2200	16 x 35.5	0.14	2340
RE3-50V332M	3300	18 x 35.5	0.16	2810
63 V				
RE3-63V4R7M	4.7	5 x 11	0.10	45
RE3-63V100M	10	5 x 11	0.10	66
RE3-63V220M	22	5 x 11	0.10	100
RE3-63V330M	33	6.3 x 11	0.10	140
RE3-63V470M	47	6.3 x 11	0.10	170
RE3-63V101M	100	10 x 12.5	0.10	300
RE3-63V221M	220	10 x 16	0.10	470
RE3-63V331M	330	10 x 20	0.10	710
RE3-63V471M	470	12.5 x 20	0.10	900
RE3-63V102M	1000	16 x 25	0.10	1300
100 V				
RE3-100VR10M	0.1	5 x 11	0.08	2.1
RE3-100VR22M	0.22	5 x 11	0.08	4.7
RE3-100VR33M	0.33	5 x 11	0.08	7
RE3-100VR47M	0.47	5 x 11	0.08	10
RE3-100V010M	1	5 x 11	0.08	21
RE3-100V2R2M	2.2	5 x 11	0.08	30
RE3-100V3R3M	3.3	5 x 11	0.08	40
RE3-100V4R7M	4.7	5 x 11	0.08	45
RE3-100V100M	10	6.3 x 11	0.08	75
RE3-100V220M	22	6.3 x 11	0.08	130
RE3-100V330M	33	8 x 11.5	0.08	180
RE3-100V470M	47	10 x 12.5	0.08	230
RE3-100V101M	100	10 x 20	0.08	370
RE3-100V221M	220	12.5 x 20	0.08	620
RE3-100V331M	330	12.5 x 25	0.08	760
RE3-100V471M	470	16 x 25	0.08	1000
RE3-100V102M	1000	18 x 40	0.08	1380
160 V				
RE3-160VR47M	0.47	6.3 x 11	0.20	15
RE3-160V010M	1	6.3 x 11	0.20	22
RE3-160V2R2M	2.2	6.3 x 11	0.20	32
RE3-160V3R3M	3.3	6.3 x 11	0.20	40
RE3-160V4R7M	4.7	6.3 x 11	0.20	48
RE3-160V100M	10	8 x 11.5	0.20	81
RE3-160V220M	22	10 x 16	0.20	151
RE3-160V330M	33	10 x 20	0.20	202
RE3-160V470M	47	12.5 x 20	0.20	266
RE3-160V101M	100	12.5 x 25	0.20	422
RE3-160V221M	220	16 x 31.5	0.20	783
RE3-160V331M	330	18 x 35.5	0.20	1080
200 V				
RE3-200VR47M	0.47	6.3 x 11	0.20	15
RE3-200V010M	1	6.3 x 11	0.20	22
RE3-200V2R2M	2.2	6.3 x 11	0.20	32
RE3-200V3R3M	3.3	6.3 x 11	0.20	40
RE3-200V4R7M	4.7	8 x 11.5	0.20	56
RE3-200V100M	10	10 x 12.5	0.20	94
RE3-200V220M	22	10 x 20	0.20	170

Note: Allowable Ripple Current 120 Hz at 85°C

This catalog printed in U.S.A. on 11/99.
Specification and dimensions in this catalog are subject to change without notice.
If necessary, drawings can be provided.

RE3 Miniature Aluminum Electrolytic Capacitors

Standard Ratings

ELNA PART NO. / WV (V)	CAP. (μF)	SIZE (ϕ x L) (mm)	tan δ	Ripple Current (mArms)
RE3-200V330M	33	12.5 x 20	0.20	223
RE3-200V470M	47	12.5 x 20	0.20	265
RE3-200V101M	100	16 x 25	0.20	483
RE3-200V221M	220	18 x 35.5	0.20	882
250 V				
RE3-250VR47M	0.47	6.3 x 11	0.20	15
RE3-250V010M	1	6.3 x 11	0.20	22
RE3-250V2R2M	2.2	6.3 x 11	0.20	32
RE3-250V3R3M	3.3	8 x 11.5	0.20	48
RE3-250V4R7M	4.7	8 x 11.5	0.20	56
RE3-250V100M	10	10 x 16	0.20	101
RE3-250V220M	22	12.5 x 20	0.20	182
RE3-250V330M	33	12.5 x 25	0.20	243
RE3-250V470M	47	12.5 x 25	0.20	295
RE3-250V101M	100	16 x 31.5	0.20	528
315 V				
RE3-315VR47M	0.47	6.3 x 11	0.24	15
RE3-315V010M	1	6.3 x 11	0.24	22
RE3-315V2R2M	2.2	8 x 11.5	0.24	38
RE3-315V3R3M	3.3	10 x 12.5	0.24	53
RE3-315V4R7M	4.7	10 x 12.5	0.24	65
RE3-315V100M	10	10 x 20	0.24	115
RE3-315V220M	22	12.5 x 20	0.24	182
RE3-315V330M	33	16 x 25	0.24	277
RE3-315V470M	47	16 x 25	0.24	330
RE3-315V101M	100	18 x 31.5	0.24	567
350 V				
RE3-350VR47M	0.47	6.3 x 11	0.24	15
RE3-350V010M	1	6.3 x 11	0.24	22
RE3-350V2R2M	2.2	8 x 11.5	0.24	38
RE3-350V3R3M	3.3	10 x 12.5	0.24	53
RE3-350V4R7M	4.7	10 x 12.5	0.24	65
RE3-350V100M	10	10 x 20	0.24	115
RE3-350V220M	22	12.5 x 25	0.24	197
RE3-350V330M	33	16 x 25	0.24	277
RE3-350V470M	47	16 x 25	0.24	330
RE3-350V101M	100	18 x 31.5	0.24	507

ELNA PART NO. / WV (V)	CAP. (μF)	SIZE (ϕ x L) (mm)	tan δ	Ripple Current (mArms)
400 V				
RE3-400VR47M	0.47	6.3 x 11	0.24	15
RE3-400V010M	1	6.3 x 11	0.24	22
RE3-400V2R2M	2.2	8 x 11.5	0.24	38
RE3-400V3R3M	3.3	10 x 12.5	0.24	54
RE3-400V4R7M	4.7	10 x 16	0.24	71
RE3-400V100M	10	12.5 x 20	0.24	123
RE3-400V220M	22	12.5 x 25	0.24	197
RE3-400V330M	33	16 x 25	0.24	277
RE3-400V470M	47	16 x 31.5	0.24	361
450 V				
RE3-450VR47M	0.47	8 x 11.5	0.24	18
RE3-450V010M	1	8 x 11.5	0.24	25
RE3-450V2R2M	2.2	10 x 12.5	0.24	43
RE3-450V3R3M	3.3	10 x 16	0.24	59
RE3-450V4R7M	4.7	10 x 20	0.24	76
RE3-450V100M	10	12.5 x 20	0.24	123
RE3-450V220M	22	16 x 25	0.24	226
RE3-450V330M	33	16 x 31.5	0.24	304
RE3-450V470M	47	16 x 35.5	0.24	380

Note: Allowable Ripple Current 120 Hz at 85°C

This catalog printed in U.S.A. on 5/99.
Specification and dimensions in this catalog are subject to change without notice.
If necessary, drawings can be provided.